JVC

ENGLISH
DEUTSCH
FRANÇAIS
NEDERLANDS
CASTELLANO
ITALIANO

AV-21NT4SU
AV-21NT4BU
AV-28NT4SU
AV-28NT4BU

COLOUR TELEVISION — INSTRUCTIONS

FARBFERNSEHGERÄT — BEDIENUNGSANLEITUNG
TELEVISEUR COULEUR — MANUEL D'INSTRUCTIONS
KLEURENTELEVISIE — GEBRUIKSAANWIJZING
TELEVISOR A COLOR — MANUAL DE INSTRUCCIONES
TELEVISORE A COLORI — INSTRUZIONI

Thank you for buying this JVC colour television.
To make sure you understand how to use your new TV, please read this manual thoroughly before you begin.

ENGLISH

IMPORTANT SAFEGUARDS

1. WATER AND MOISTURE

The apparatus shall not be exposed to dripping or splashing water and no object filled with liquids, such as vases , should be placed on the apparatus.

2. HEAT

Never place the set near heat sources.
Never put a naked flame, such as a candle, on the top of TV set.

3. VENTILATION

Do not cover the ventilation openings in the cabinet and never place the set in a confined space such as in a bookcase or built-in cabinet unless proper ventilation is provided. Leave a minimum 10 cm gap all around the unit.

4. OBJECT ENTRY

Do not insert foreign objects, such as needles and coins, in the ventilation openings.

5. LIGHTNING STRIKE

You should disconnect the set from the mains and the aerial system during thunderstorms.

6. CLEANING

Unplug the set from the mains while cleaning.

7. AFTER MOVING THE SET

If the set is moved or turned, the MAIN POWER button must be switched off for at least 15 minutes in order to take out colour patches on the screen.

8. CAUTION

There is danger of choking or suffocation if the cap which is removed from the TV is accidentally swallowed by children. Store the cap out of the reach of children.

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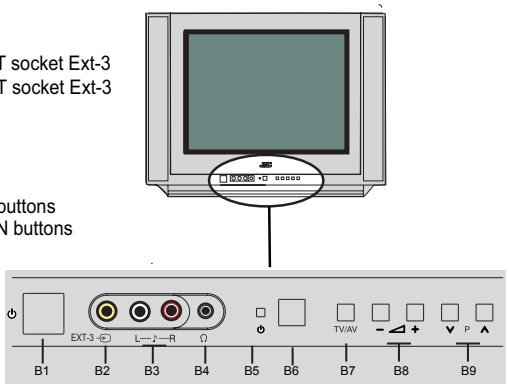
IDENTITY OF LOCAL & REMOTE CONTROL

LOCAL CONTROL

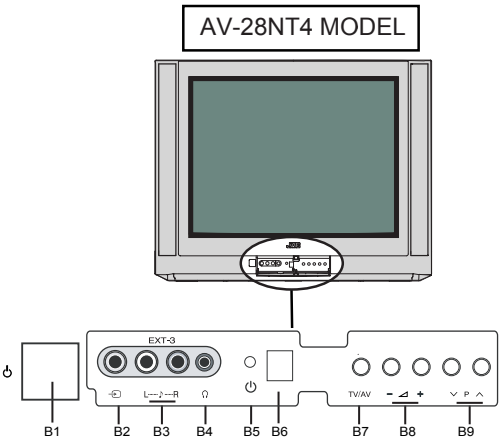
Front

B1 MAIN POWER button
B2 FRONT VIDEO INPUT socket Ext-3
B3 FRONT AUDIO INPUT socket Ext-3
B4 HEADPHONE
B5 STAND-BY indicator
B6 REMOTE sensor
B7 TV / AV button
B8 VOLUME UP/DOWN buttons
B9 PROGRAM UP/DOWN buttons

AV-21NT4 MODEL

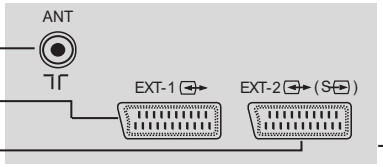


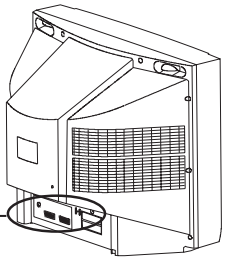
AV-28NT4 MODEL



Rear

AERIAL socket
SCART 1 socket EXT-1
SCART 2 socket EXT-2



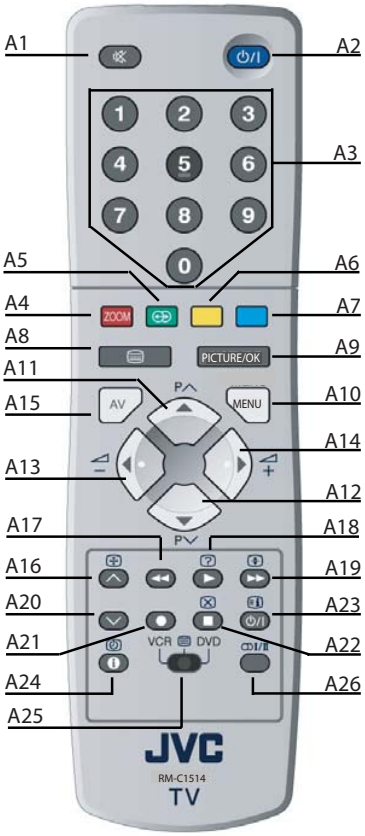


REMOTE CONTROL

TV mode

A1 SOUND MUTE
A2 ⏻/I POWER
A3 0 - 9 NUMBER 0..9
A4 ZOOM / SKIP
A5 SOUND EFFECT / MOVE
A6 SLEEP / DELETE
A7 Not used
A8 TV > TELETEXT
A9 PICTURE / OK
A10 MENU
A11 PROGRAM UP (CURSOR UP)
A12 PROGRAM DOWN (CURSOR DOWN)
A13 VOLUME DOWN (CURSOR LEFT)
A14 VOLUME UP (CURSOR RIGHT)
A15 TV / AV
A16 Not used
A17 Not used
A18 Not used
A19 Not used
A20 Not used
A21 Not used
A22 Not used
A23 Not used
A24 INFORMATION
A25 V D VCR / TELETEXT / DVD switch
A26 I / II MODE Stereo/Mono
Dual language I / II

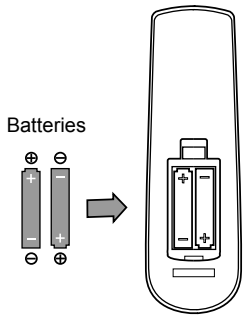
RM-C1514



TELETEXT mode

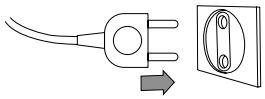
A1 SOUND MUTE
A2 ⏻/I POWER
A3 0 - 9 NUMBER 0..9
A4 RED
A5 GREEN
A6 YELLOW
A7 CYAN
A8 TELETEXT > TV
A9 Not used
A10 VOL/BRIGHTNESS MENU SELECTION
A11 PAGE UP
A12 PAGE DOWN
A13 VOL / BRIGHTNESS DOWN
A14 VOL / BRIGHTNESS UP
A15 Not used
A16 PAGE HOLD
A17 Not used
A18 REVEAL
A19 DOUBLE SIZE
A20 Not used
A21 Not used
A22 CANCEL
A23 INDEX
A24 SUBPAGE
A25 VCR / TELETEXT / DVD switch
A26 Not used

SETTING UP

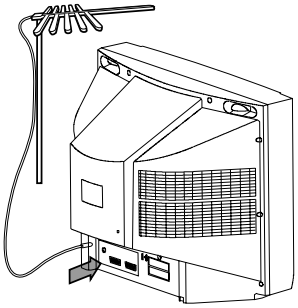


Open remote control battery compartment (at the rear) and insert two 1.5V type AA / R6 batteries.

Warning: be careful to respect battery polarities.



Insert the main plug into a 220 - 240V 50Hz AC power socket.

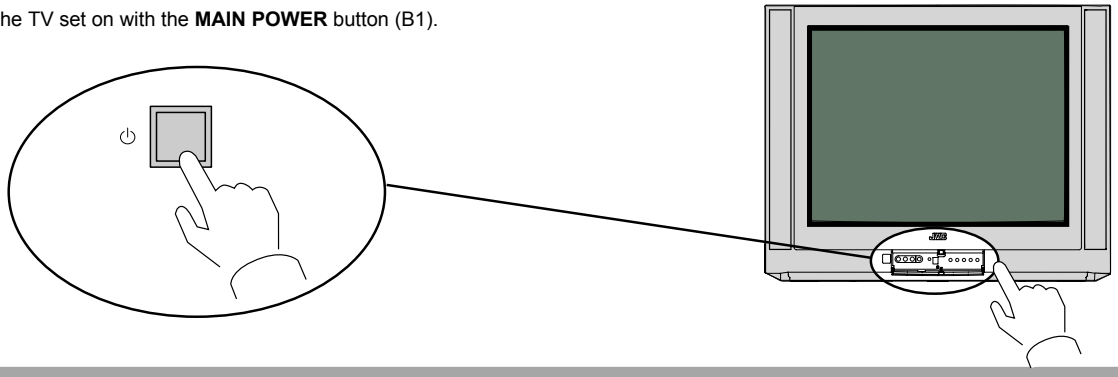


Connect aerial to aerial jack. It is usually connected by means of a 75 ohm cable.

START UP

SWITCHING ON

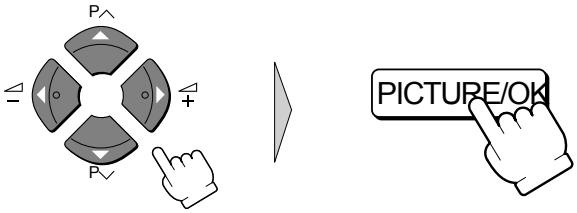
Switch the TV set on with the **MAIN POWER** button (B1).

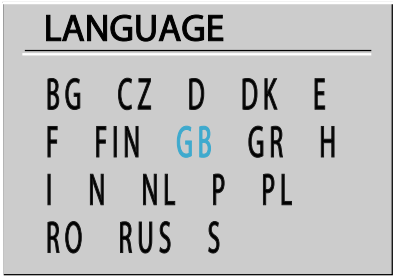


LANGUAGE MENU

The very first time that you turn on the TV, the **LANGUAGE** menu will appear on the screen. Its purpose is to enable you to select the language that will be used for all the OSD (On Screen Display) menus. The user must enter a choice of language before proceeding further.

The descriptions used in the menu are those of the country code (e.g. GB = English, NL = Holland etc).





Selection is made by use of the remote control **CURSOR UP** (A11) / **CURSOR DOWN** (A12) buttons and **CURSOR LEFT** (A13) / **RIGHT** (A14) buttons. Once you are satisfied with your selection, push the **OK** button (A9) to confirm your choice, and then the menu will disappear.

The language entered at this stage can still be modified at any later time, by entering the **LANGUAGE** selection (accessed from the **FEATURES** menu page 9).

Note : The languages shown are subject to modification without prior notice.

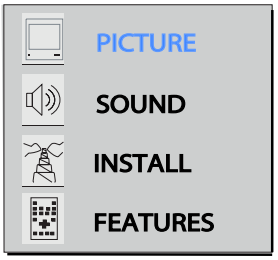
INSTALLATION

AUTO TUNING SYSTEM

MENU SELECTION

Press remote control **MENU** button (A10) to display the **MAIN MENU**.

Move the cursor to INSTALL by using the remote control CURSOR UP (A11),DOWN(A12) buttons.
Then press the remote control OK button (A9).



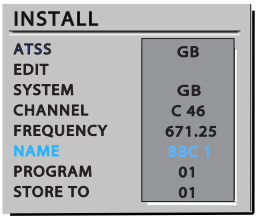
Note: All menus are removed within 60 seconds if you don't press any button.

COUNTRY SELECTION

Position the cursor at **ATSS** Menu and select country code where TV is used by pressing the remote control **CURSOR LEFT** (A13), **RIGHT(**A14) buttons.

The following countries can be selected.

A, B, CH, CZ, D, DK, E
F, FIN, GB, GR, H, I, IRL
N, NL, P, PL, S, SK Others



ATSS - Auto Tuning and Sorting System

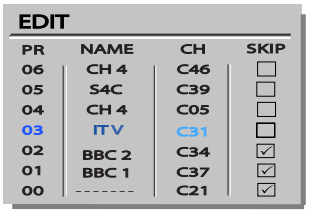
After selecting country code, press and hold OK button for 3 - 4 seconds until "**Please wait!**" is displayed, then auto program tuning starts searching all the available TV stations in your area. When auto tuning and sorting is completed, the **EDIT** menu with the recorded programs appears on the screen.

To exit the **EDIT** menu, press **MENU** button 3 times, then the menu display will disappear from TV screen. Now you can select program using the remote control **UP** (A11) or **DOWN** (A12) buttons.

EDIT MENU

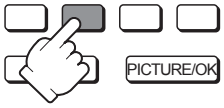
The **EDIT** menu shows you the programme position assignment. When using the **AUTO TUNING** method, the broadcasts may not be found and stored in the order you desired. For example, BBC1 may not be allocated to programme number 01, and BBC2 may not be allocated to programme number 02, etc. The **EDIT** menu enables you to change the programme position assignment according to your personal preference.

To reach the **EDIT** menu you have to first select **INSTALL** menu from the **MAIN** menu.



CHANGING ORDER OF CHANNELS

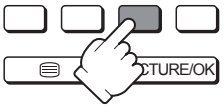
Position the cursor to the programme number you want to move and press the remote control **GREEN** (A5) **MOVE** button. The programme turns to red colour. Then use the **UP** (A11) or **DOWN** (A12) buttons to move the programme number you wish to store it to and press **MOVE** button again to confirm the operation. Press **MENU** to return to **INSTALL** menu.



DELETE PROGRAMME POSITION DATA

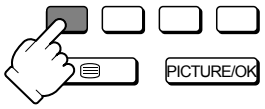
Position the cursor to the programme number you wish to delete using the remote control **UP** (A11) or **DOWN** (A12) buttons. Press the **YELLOW/DELETE** (A6) button.

The delete programme is instantly moved to programme N° 99. The programme which was located at N° 99 will automatically move to N° 98.



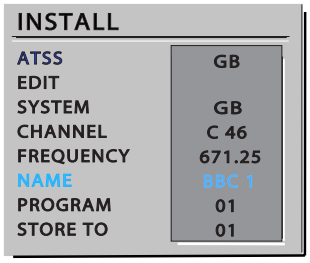
SKIPPING THE CHANNELS

Position the cursor to the programme number you wish to skip, then press the **RED** (SKIP) (A4) button. A skipped programme is marked with the sign " ✓ " at its right end. The channel corresponding to a skipped programme will not appear on screen when changing channels using **PROGRAM UP** (A11) / **DOWN** (A12) buttons.



MANUAL CHANNEL TUNING

Tuning by **ATSS** (Auto Tuning Sorting System) is recommendable, as it is the easiest tuning method. But Manual Tuning is also possible using the following procedure.



BROADCASTING SYSTEM SELECTION

Select **INSTALL m**enu and using the remote control **CURSOR UP** (A11) / **DOWN** (A12) buttons, move the cursor to **SYSTEM** menu and select the appropriate system by the **LEFT** (A13) or **RIGHT** (A14) button.

"FRANCE"	France SECAM L/L'
"GB"	Great Britain / Ireland PAL-I/I'
"EURO"	Westen Europe PAL-SECAM B/G
"E/EURO"	Eastern Europe PAL-SECAM D/K

ACTIVATING MANUAL TUNING

Move the cursor to **FREQUENCY** (channel frequency) menu and press and hold for more than 2 seconds the remote control **CURSOR LEFT** (A13) or **RIGHT** (A14) buttons for searching. When one channel is tuned, the corresponding station name is indicated automatically in **NAME** menu.

To tune the next channel, press the remote control **CURSOR LEFT** (A13) or **RIGHT** (A14) buttons again.

CHANNEL AND FREQUENCY MENU

If you know the channel or frenquency number you want to search, enter the data by 0...9 buttons.
TV will tune that channel quickly.

PERFORM FINE TUNING

If you are unable to obtain good picture or reasonable sound volume due to poor reception it is possible to perform fine tuning.
- Select the "**FREQUENCY**" menu.
- Press for less than 2 seconds, the remote control **CURSOR LEFT** (A13) and **CURSOR RIGHT** (A14) buttons to activate **FINE TUNING** **− / +** in steps of 0.05 MHz(50kHz).

STORING CHANNEL NAME

When one channel is tuned, the corresponding station NAME will be detected automatically. But in some cases, NAME will not be detected due to the broadcasting situation. You may put in the channel NAME yourself.

Position the cursor to **NAME** menu and press the remote control **CURSOR RIGHT**(A14) button. A cursor appears on the left end of NAME line ("-------"). Then press **CURSOR UP** (A11) or **DOWN** (A12) buttons untill you get the right letter or symbol. Move the cursor to the next position by using **CURSOR LEFT** (A13) or **RIGHT** (A14) buttons and repeat the operation. Press **OK** (A9) button to store the NAME.

PROGRAM MENU

The number on the right side of the **PROGRAM** menu indicates the program number of the currently displayed channel.

STORE TO MENU

Select **STORE TO** menu and select the program number by 0....9 buttons or **CURSOR LEFT** (A13) or **RIGHT** (A14) buttons to which you want to store the currently displayed channel then press **OK** button.

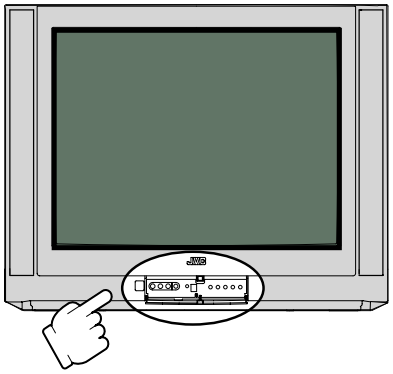
Warning ! If you store the number already programmed, the previous programmes will be erased automatically.

DAILY USE

SWITCHING ON AND OFF TV SET

SWITCHING ON

If stand-by indicator (B5) is not lit, then the TV set is powered off.
Switch the set ON with **POWER (ON/OFF)** Button ⏻ (B1), then, stand-by indicator turns to red.
Press again **PROGRAM UP** or **DOWN** buttons (B9) on the front of the set, or **POWER** button (A2) or **UP (A11)/DOWN (A12)** button or, one of the NUMBER 0...9 button on the remote control, then stand-by indicator turn to green and picture appears on the screen.



If **stand-by indicator** (B5) is flashing red and green, TV set is in **CHILD LOCK** mode. To deblock CHILD LOCK, press the remote control **POWER** button (A2) or one of NUMBER 0...9 buttons (A3) or **PROGRAM UP** (A11) / **DOWN** (A12) buttons.

Note : The front panel **PROGRAM UP** or **DOWN (**B9) button will not function when CHILD LOCK is ON.

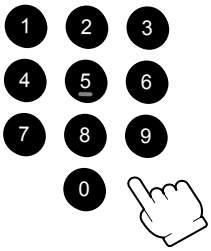
SWITCHING OFF

Press **POWER** button (A2) on the remote control to return the set to its **STAND BY** mode. If you don't use the set for an extended period of time, turn it off with **MAIN POWER** button (B1) on the set.

PROGRAM SELECTION (FROM 0 TO 99)

DIRECT SELECTION

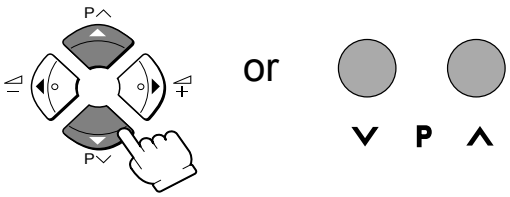
Use the remote control NUMBER 0..9 buttons (A3). For two digit program numbers, enter the second digit within 2 seconds.



From AV mode, you can select TV program directly by pressing remote control 0.....9 buttons (A3).

UP/DOWN SELECTION

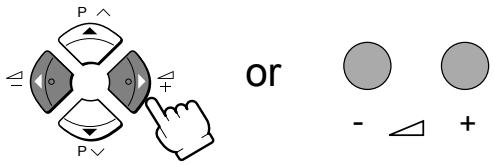
Use the remote control **PROGRAM UP** (A11) **/ DOWN** (A12) buttons or the TV set front panel **PROGRAM UP / DOWN** buttons (B9).



SOUND CONTROL

Volume adjustment

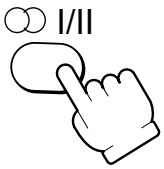
Use the remote control **VOLUME UP** (A14) / **DOWN** (A13) buttons or the TV set front panel **VOLUME UP / DOWN** buttons (B8).



Mono forcing, dual language

- If you are unable to get good sound quality for a program due to poor reception, you can force a change from stereo to mono transmission by pressing the remote control **MODE** button (A26).

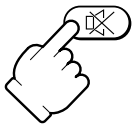
  Then the program status display will indicate "**MONO**" with a ( ) icon.



- On the other hand, during a program with dual language transmission, the **MODE** button (A26) allows you to toggle between the first and second language. The program status display will indicate "DUAL 1" or "DUAL 2" (plus NICAM according to the received signal) instead of Stereo or Mono.
- To return to initial state, press again the **MODE** button (A26).

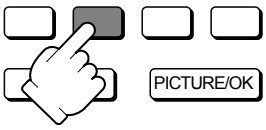
Mute

- Mute the sound by pressing the remote control **SOUND MUTE** button (A1).
- Then, logo is displayed. The previous sound setting is returned after pressing the same button a second time.
- If a sound related function is used (e.g. VOLUME,) then the **MUTE** will also be cancelled.

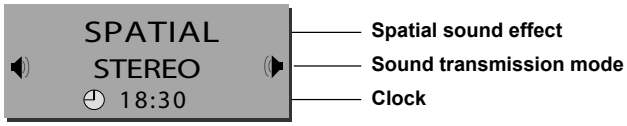


Sound effects

A SPATIAL sound effect is available, by using the remote control (A5) button.

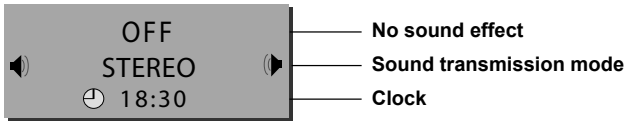


The following display appears:



To return to initial sound effect, press again the (A5) button.

The following display appears:

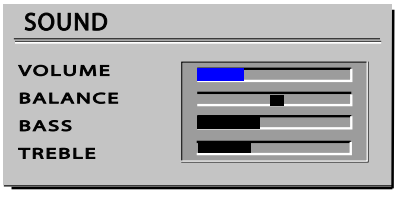


For other adjustments such as BALANCE, BASS or TREBLE, use the **SOUND** menu (here under).

SOUND MENU

Select **SOUND** menu from the **MAIN** menu.

- Select **VOLUME** function to adjust the volume level.
- Select **BALANCE** function to adjust sound balance between the left and right speakers. If the indicator is highlighted in red, then the central balance position has been found.
- Select the **BASS** and **TREBLE** functions to adjust the tone levels.

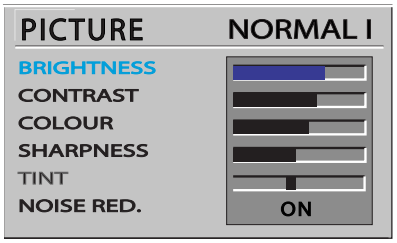


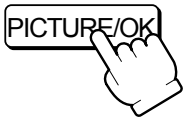
PICTURE CONTROL

Select PICTURE menu from the MAIN menu.

- Select and adjust the level of each function: BRIGHTNESS, CONTRAST, COLOUR, SHARPNESS, TINT (if available) and NOISE REDUCTION.
- The above modified values are automatically stored in FAVOURITE mode.
- NOISE REDUCTION can be on (activated) or off.
- The FAVOURITE preset contains the settings that you last entered.

If the NTSC standard is detected (eg from VHS player connected to EXT-1), then TINT will be available. Otherwise TINT will be displayed, but not selectable.



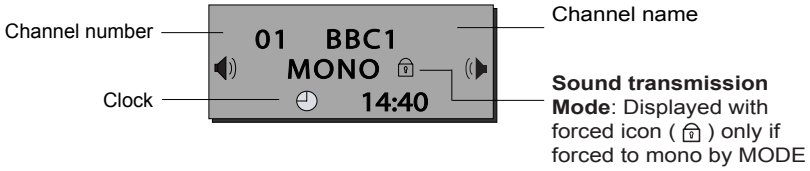


You can select three pictures settings, by pressing repeatedly the remote control PICTURE/OK button (A9) :

- **NORMAL I** (standard hard picture)
- **NORMAL II** (standard soft picture)
- **FAVOURITE.**

PROGRAM STATUS DISPLAY (INFORMATION)

Use the remote control ⓘ button (A24) to display (for 4 seconds only) program status information. This display appears also after a program selection or after switching on the TV set.

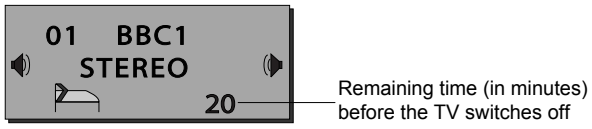


SLEEP FUNCTION

The set will turn off (to stand-by mode) after a period of time that you can select. By pressing repeatedly the remote control **YELLOW** button (A6), you can enter one of the following settings :

OFF > 20 min > 40 min > 60 min > 80 min > 100 min > 120 min > OFF

The **SLEEP** time remaining (before TV turn-off) can be seen again at any time by one touch on the remote control **YELLOW** button (A6). A second touch (while the status display is on screen) will modify the SLEEP time remaining.



FORMAT SELECTION

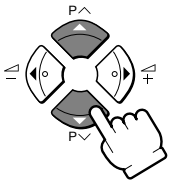
AUTO setting: If picture format signalling data is received, then the most appropriate ZOOM format will be automatically selected.
Otherwise, the preferred mode of the user can be forced by repeated pressing of the remote control ZOOM button (A4): The following picture formats are available:

AUTO > 16:9 > FULL SCREEN > AUTO

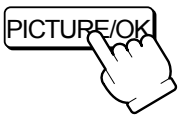
FEATURES MENU

Select the **FEATURES** MENU from the main MENU as follows :

Press on the button MENU

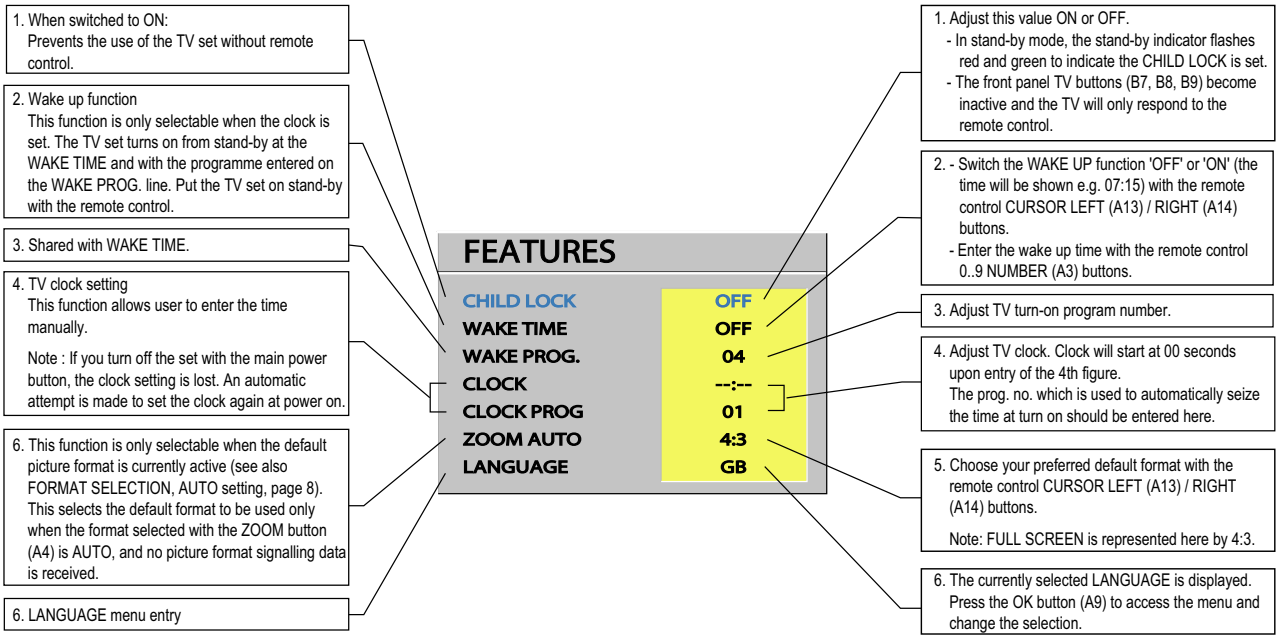


Position cursor on FEATURES menu



Press on the OK button

FEATURES menu contains the following sub-menus.

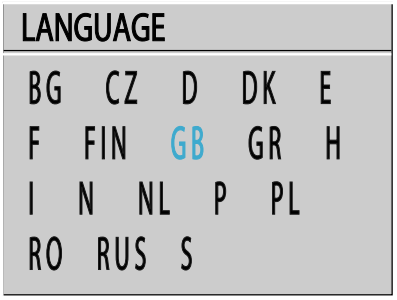

1. When switched to ON:
Prevents the use of the TV set without remote control.
2. Wake up function
This function is only selectable when the clock is set. The TV set turns on from stand-by at the WAKE TIME and with the programme entered on the WAKE PROG. line. Put the TV set on stand-by with the remote control.
3. Shared with WAKE TIME.
4. TV clock setting
This function allows user to enter the time manually.
Note : If you turn off the set with the main power button, the clock setting is lost. An automatic attempt is made to set the clock again at power on.
6. This function is only selectable when the default picture format is currently active (see also FORMAT SELECTION, AUTO setting, page 8). This selects the default format to be used only when the format selected with the ZOOM button (A4) is AUTO, and no picture format signalling data is received.
6. LANGUAGE menu entry
FEATURES
CHILD LOCK OFF
WAKE TIME OFF
WAKE PROG. 04
CLOCK --:--
CLOCK PROG 01
ZOOM AUTO 4:3
LANGUAGE GB
1. Adjust this value ON or OFF.
- In stand-by mode, the stand-by indicator flashes red and green to indicate the CHILD LOCK is set.
- The front panel TV buttons (B7, B8, B9) become inactive and the TV will only respond to the remote control.
2. - Switch the WAKE UP function 'OFF' or 'ON' (the time will be shown e.g. 07:15) with the remote control CURSOR LEFT (A13) / RIGHT (A14) buttons.
- Enter the wake up time with the remote control 0..9 NUMBER (A3) buttons.
3. Adjust TV turn-on program number.
4. Adjust TV clock. Clock will start at 00 seconds upon entry of the 4th figure.
The prog. no. which is used to automatically seize the time at turn on should be entered here.
5. Choose your preferred default format with the remote control CURSOR LEFT (A13) / RIGHT (A14) buttons.
Note: FULL SCREEN is represented here by 4:3.
6. The currently selected LANGUAGE is displayed. Press the OK button (A9) to access the menu and change the selection.

LANGUAGE SELECTION

Select LANGUAGE menu from the FEATURES menu.

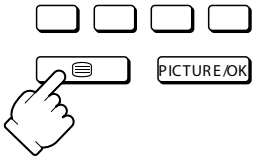
- Select the preferred LANGUAGE by use of the CURSOR LEFT (A13), RIGHT (A14) buttons, and the CURSOR UP (A11) or DOWN (A12) buttons.
- Press the OK button (A9) to confirm the selection (the choice will be highlighted in red).

Note : The languages shown are subject to modification without prior notice.



TELETEXT

ENTERING/LEAVING TELETEXT MODE



- Set the VCR / ▤ / DVD switch (A25) to the ▤ (teletext) position.
- Press the remote control TELETEXT (▤) button (A8) to select teletext mode.
- To return to TV mode, press again the TELETEXT (▤) button (A8).
- **Note** : Some of the buttons may not work if the VCR / ▤ / DVD switch is not set to the ▤ (teletext) position.

PAGE SELECTION

- You can directly enter the 3 figure page number by using the remote control **NUMBER** 0..9 buttons (A3).
- You can sequentially select teletext pages by pressing the remote control **PAGE UP** (A11) / **DOWN** (A12) buttons.

COLOUR buttons FOR TELETEXT

- A red, green, yellow, and blue field is shown at the bottom of the screen. If TOP or FLOF teletext (FASTTEXT) is transmitted by the station, pressing the corresponding colour button on the remote controller, you can select the desired page easily.

Once a request is made, the page number is shown in the extreme top left corner of the screen. If the requested page is not immediately available the rolling header will be active until the page arrives.

USEFUL TELETEXT FUNCTIONS

INDEX button (A23)

Allows you to return directly to the initial teletext page.

PAGE HOLD button (A16)

Several sub pages can be combined under a page number and are scrolled at an interval determined by the television station. The presence of sub pages is indicated by, for example, 3/6 beneath the time, which means that you are looking at the 3rd page of a total of 6 pages. If you want to look at a subpage for a longer period of time, press the HOLD button. " **HOLD** " appears at the top of the screen and the contents of the subpage shown are kept on the screen and no longer updated or switched to other subpages. Pressing the **HOLD** button again, the current subpage appears.

SUBPAGE button (A24)

Allows you to request a specific subpage:

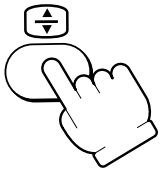
- Press the **SUBPAGE** button. The letter before the page number in the teletext will change from "P" to "S" to indicate that the subpage fuction is active.
- In place of the telext clock, in the top right hand corner of the display, **- - : - -** will appear in red. This is ready to accept the subpage number.
- Enter directly the subpage number you want with the remote control **NUMBER 0..9** buttons (A3): for example to request the 2nd subpage, type 0002.
- The clock will then be replaced in the header. Once found, only the requested subpage will be displayed.
- At any time, another subpage number can be entered with the remote control **NUMERO 0...9** (A3), and new figures displayed in place of the clock.
- To exit subpage mode, press the **SUBPAGE** button (A24) again. The letter before the page number will change back from "S" to"P" again.

Warning: If the subpage does not exist, then the rolling header will roll continuously and no new page will be found.

DOUBLE SIZE button (A19)

Repeadly pressing the **SIZE** button doubles the character size in the following order :

Upper half of the page> Lower half of the page > Return to normal size



REVEAL ANSWER button (A18)

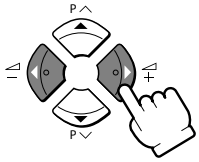
This fonction can be used on certain pages to reveal the solution of riddles.
Press the **REVEAL** button to reveal a hidden answer and press again to hide it.

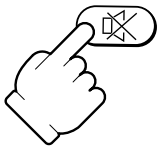
VOLUME, BRIGHTNESS CONTROL

VOLUME (and sound MUTE), BRIGHNESS controls are all possible in teletext mode. The BRIGHTNESS control is dedicated to the teletext display.

Volume change is always possible, but brightness control is only possible if teletext covers all of the screen (eg. brightness is disabled when teletext is being used for subtitles).

- Access the VOLUME control by pressing the **MENU** button (A10) in teletext mode.
- A bargraph will appear at the base of screen. A second press on the **MENU** button (A10) will access the BRIGHTNESS control (if available).
- Then, the brightness or volume can be adjusted by using the remote control **CURSOR RIGHT** (A14) / **LEFT** (A13) buttons.



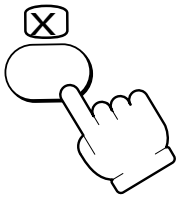


- Mute can be activated in teletext mode at any time by pressing the **SOUND MUTE** button (A1).
- Any change to the volume level will cancel the volume mute.

WATCHING TV WHILE PAGE SEARCHING

The **CANCEL** function can be used to make the teletext page transparent, thus revealing the TV picture:

- To enter cancel mode, press the **CANCEL** button (A22) while in teletext mode. The TV program will reappear on the screen, while only the teletext header remains at the top of the screen.
- If you enter a new page number in this mode: the requested page number will be in red and the page number in the header will be rolling. Once the page entered has arrived, the rolling number will stop and the requested page number will return to cyan.
- The teletext page can be made visible again by pressing the **CANCEL** button (A22).
- It should be noted that the TV program cannot be changed while teletext is active, or in cancel mode.

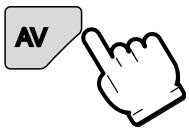


WATCHING TV WITH TELETEXT SUBTITLES

If the actual teletext page is a news flash or subtitle page, then most of the TV picture becomes visible.

CONNECTING EXTERNAL EQUIPMENT

The rear Scart EXT-1, Scart EXT-2 sockets, the front EXT -3 socket are three dedicated sockets to connect audio-video equipment.



TV/AV SELECTION

Allows to switch between TV and external modes. By repeatedly pressing the remote control **AV** (A15) or the TV front panel **TV /AV** button (B7), the on-screen display is changed as shown :

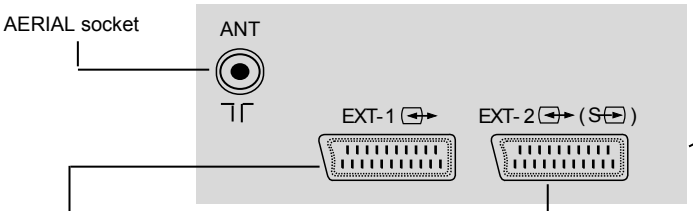
EXT-1 > EXT-2 > EXT-2 S > EXT-3 > TV

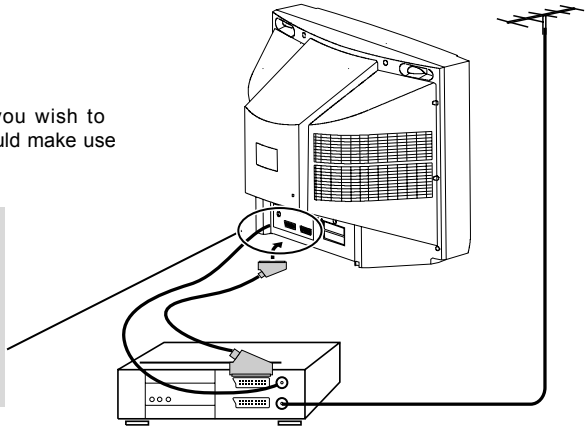
Remark: If the signal source from the rear SCART socket (EXT-1) is RGB (e.g.normally from a DVD player) then EXT-1 RGB will be displayed. You can return to TV mode also by pressing number buttons or PROGRAM UP/DOWN buttons

Rear

VCR / DVD / Video Game / Pay-TV decoder

Important: If your video equipment does not have SCART socket(s), or if you wish to use only the aerial (RF) connection (not recommended), then you should make use of program number 00 on the TV set for best performance.





REAR SCART SOCKET (EXT-1)

This socket has video / audio inputs and TV output. It is recommended to connect to this socket automatic AV switching equipment such as pay-TV decoders, video games, DVD players and most VCR's.

In most cases, when connecting powered equipment to this socket, the TV set switches automatically to AV mode. If not, then use the **AV** buttons (A15 or B7) to select **EXT-1**.

REAR SCART SOCKET (EXT-2)

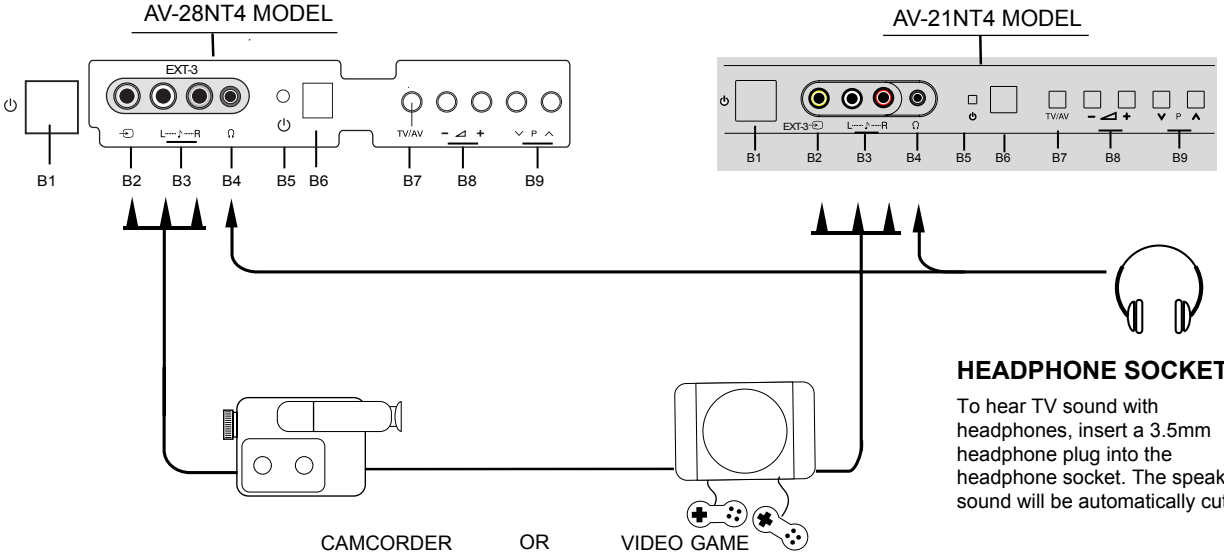
This socket has video / audio inputs and monitor output. Automatic AV switching equipment (for example most VCR's) can be connected to this socket. In most cases, when connecting powered equipment to this socket, the TV set switches automatically to AV mode. If not, then use the **AV** buttons (A15 or B7) to select **EXT-2**.

You can also receive an **S-VHS** signal by selecting **EXT-2 S** with the **AV** buttons (A15 or B7).

Front

FRONT AV SOCKET (EXT-3)

The front AV socket has audio and video inputs. Without the video input connection, audio output is not available.
To switch from TV to these inputs, use the AV buttons (A15 or B7) and select **EXT-3**.



HEADPHONE SOCKET

To hear TV sound with headphones, insert a 3.5mm headphone plug into the headphone socket. The speaker's sound will be automatically cut off.

ENGLISH

TROUBLESHOOTING

● If the plug is disconnected from the AC socket, or the TV aerial has problems, you may think there is a problem with the TV itself. Be sure to check the following before calling for service.

IMPORTANT

● Review all instruction in this manual

	PROBLEM	ACTION
■ GENERAL	The TV cannot be turned on.	● Insert the plug in an AC socket. ● Turn the main power on. (See page 3) ● The buttons on the front panel of the TV will not work if the CHILD LOCK is operating (see FEATURES menu, on page 9). Use the POWER button on the remote control to turn the TV on.
	No picture or sound.	● Check aerial connections. (See page 3). ● Select the correct input source (See page 12). ● Change the SYSTEM setting manually (see Manual Channel Tuning on page 5).
	The TV shuts off automatically.	● Did you set the SLEEP function? (See page 8). ● If the broadcast signal is not present for about 30 minutes, the set will be automatically turned off. ● For safety reasons, the TV will automatically turn off if no operations are made within approximately 3 hours after the TV is turned on with the WAKE UP function.
	The TV turns on automatically.	● Did you set the WAKE UP function? (See page 9).
	Inoperable remote control.	● Replace the batteries. (See page 3). ● Insert the batteries correctly. (See page 3). ● Use the remote control within about 7 metres of the TV.
■ PICTURE	Poor colour.	● Change the SYSTEM setting manually (see Manual Channel Tuning on page 5).
	Lines or streaks in picture (interference)	● Move any external equipment away until the interference is eliminated. ● Reposition the aerial.
	Spots (crosstalk)	● Reposition the aerial. ● Replace with an aerial with better directionality.
	Double pictures (ghosts)	● Reposition the aerial. ● Replace with an aerial with better directionality.
	Snowy pictures (noise)	● Check aerial connections. ● Redirect the aerial. ● Replace or repair the aerial.
■ SOUND	No sound from the TV's speakers	● Disconnect the headphones.

The following are normal and are NOT malfunctions:

● When touching the picture tube surface, you might feel a slight charge of static electricity. This is because the picture tube contains static electricity; it does not affect the human body.

● The TV may emit a crackling sound due to a sudden change of temperature. There is no problem unless the picture or sound is abnormal.

● When a still, bright image (of a white dress, for example) appears on the screen, the image may be coloured. This problem occurs in all picture tubes, and as the bright image disappears, the colour also disappears.

● This TV is equipped with a microcomputer that may operate abnormally due to interference from external equipment. If this happens, turn off the main power and disconnect the power cord from the AC socket. Then reconnect the power cord to the AC socket and turn on the main power again.

SPECIFICATIONS

Item \ Model	AV-21NT4SU / AV-21NT4BU	AV-28NT4SU / AV-28NT4BU
Broad casting systems	CCIR B/G, I ,D/K, L/L'	
Colour systems	PAL, SECAM The EXT terminals also support the NTSC 3.58/4.43 MHz system.	
Channels and frequencies	* E2-E12, E21-E70, S1-S41, X, Y, Z, Z+1, Z+2, ITALY A-H, ITALY H+1, ITALY H+2, F2-F10, F21-F70, R1-R12, R21-R70 * French cable TV channel of broadcast frequencies 116 - 172 MHz and 220 - 469 MHz	
Sound-multiplex systems	A2 (B/G, D/K), NICAM (B/G, D/K, I, L) systems	
Teletext systems	FLOF (Fastext) / TOP / WST (World standard system)	
Power requirements	AC 220-240V, 50 Hz	
Power consumption	49W, stand-by 3W	69W, stand-by 3W
Picture tube size	Visible area 51cm (measured diagonally)	Visible area 66cm (measured diagonally)
Audio output	Rated Power output: 4.5W + 4.5W	Rated Power output: 7W + 7W
Ext-1 terminal	Euroconnector (21-pin,SCART) * Video input, Audio L/R inputs and RGB inputs are available * TV broadcast outputs (Video and Audio L/R) are available.	
Ext-2 terminal	Euroconnector (21-pin, SCART) * Video input, S-VIDEO (Y/C) input, Audio L/R inputs are available * Video and Audio L/R outputs are available	
Ext-3 terminal	RCA connerctors x 3 * Video input and Audio L/R inputs are available.	
Headphone jack	Stereo mini-jack (3.5mm in diameter)	
Weight	20.3 kg	31.5 kg
Dimensions (W x H x D)	616 mm x 477 mm x 479.7 mm	746 mm x 596 mm x 480 mm
Remote control unit	RM-C1514, battery AA / R6 x 2	

Design and specifications are subject to change without notice

Pictures displayed on the screen using this TV's image processing functions should not be shown for any commercial or demonstration purpose in public places (tearooms and halls in hotels, etc.) without the consent of the owners of copyright of the original picture sources, as this constitutes an infringement of copyright.

JVC

VICTOR COMPANY OF JAPAN, LIMITED

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